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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,634	07/21/2003	Patrick Carl Wiley	I0780096 TWB/cd	4571

7590 03/24/2008
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EXAMINER

SELLMAN, CACHET I

ART UNIT	PAPER NUMBER
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1792

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03/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/622,634	Applicant(s) WILEY, PATRICK CARL	
	Examiner CACHET I. SELLMAN	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6-12,14-20,22-30 and 36-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6-12,14-20,22-30 and 36-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 4, and 6 -10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. (US 5215402) in view of Corbin et al. (US 4854771) Pacey (EP0041335) and Wiley (US 5653552).

Stonwell et al. discloses a process for imprinting a pattern in an asphalt surface where a grid-like template is compressed into an asphalt surface. The template is removed and the asphalt is allowed to harden, then a thin coating of colored concrete can be added to the surface of the patterned asphalt to enhance the brick and mortar effect (abstract).

Stonwell et al. is silent as to providing a pre-formed thermally settable sheet made of thermoplastic material; providing at least one further pre-formed thermally

settable sheet; placing the first and at least one further sheet on the asphalt in an aligned configuration then gradually heating in situ to a temperature sufficient to bond the sheets to configure to the first pattern as required by **claim 1**.

Corbin Jr. et al. teaches a method of installing a pre-formed pavement marking material on a asphalt surface where the asphalt is softened by means of a portable infrared heater to a temperature sufficient so the pre-formed marking material may be pressed into the asphalt (abstract, col. 2, lines 33-37) and placing the marking material onto the heated pavement (heating in situ), and pressing the marking material using a roller (col. 2, lines 56-66). Corbin Jr. et al. further teaches that the pre-formed thermoplastic marking materials are superior to painted marking material because they have a longer service life (col. 1, lines 47-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. to include the preformed marking material as taught by Corbin, Jr. et al. One would have been motivated to do so because both disclose processes of marking asphalt surfaces and Corbin Jr. et al. teaches the use of preformed marking material over coating because of the longer service life.

Pacey et al. discloses a process for heat bonding thermoplastic road marking material to a road which comprises heating the marking to its melting point to create a bond between the marking and the road surface (page 1, lines 16-page 2, line 3). Pacey discloses the marking may be supplied in two or more sections such as an arrowhead,

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which would require aligning of the pieces when being applied to the road (page 5, line 36- page 6, line 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. to include the heat bonding of Pacey et al. One would have been motivated to do so because both disclose processes for providing marking materials to roadways and Pacey further teaches that markings can be in more than one section therefore the process is useful in order to assure the sections are aligned properly.

Wiley teaches a process for heating by moving a heater over a surface in a successive forward and backward direction (abstract) which allows for the asphalt to be heated uniformly and efficiently with minimal or no overheating (col. 6, lines 15-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stowell et al. in view of Corbin Jr. et al. to include gradually heating of the substrate. One would have been motivated to do so because both discloses processes for heating pavement in order to apply a marking material and Wiley teaches that heating gradually provides uniform heating in an efficient manner while minimizing or eliminating burning or smoking (Wiley et al. col. 5, lines 40-44).

Corbin Jr. et al. teaches using a marking material having a thickness of about 25-125 mils (col. 1, lines 12-17) as required by **claim 4**.

The sheet is heated to a temperature of 150-300°F as stated by Corbin Jr. et al. (col. 2, lines 56-57) as required by **claim 7**. Wiley et al. teaches gradually heating the

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sheet to a temperature of 100-190°C (220-374°F) (col. 8, lines 29-34) as required by **claim 8**.

Stonwell et al. teaches that the pattern is formed by forming a hot and pliable asphalt surface; placing a template on the surface and imprinting the template to form a first pattern then the template is removed (abstract, col. 2, lines 60-66) since the asphalt is hot meaning it was heated to form into a pliable surface as required by **claims 9 and 10**.

As stated above Stonwell modified with Corbin Jr. et al. teaches placing a pre-formed thermally settable sheet on a substrate having a first and second surface where the second surface is not in contact with the substrate (Corbin et al. teaches that the marking material is pressed into the asphalt after being applied which means the second surface is not in contact with the substrate prior to pressing); heating the sheet in situ to a temperature for the surface to adhere to the substrate.

4. Claims 11, 12, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. (US 5215402) in view of Corbin, Jr et al. (US 4854771) and Pacey (EP0041335) as applied to claim 1 above, and further in view of Eigenmann (US 3235436).

The teachings of Stonwell et al. in view of Corbin, Jr. et al. and Pacey as applied to claim 1 are as stated above. However, these references are silent as to using a first sheet that is formed in a second pattern matching the first pattern and is alignable

therewith as well as being subdividable into a plurality of discrete sections as required by **claims 11 and 12**.

Eigenmann teaches a process for applying marking strips for crosswalk lines and other traffic aids onto a roadway where the process requires forming a plurality of patterns by subdividing the marking material into discrete sections (col. 4, lines 45-59) and matching the patterns and aligning the patterns (Fig. 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al., Corbin Jr. et al. and Pacey to form a plurality of discrete sections and aligning and forming a plurality of patterns to form a desired design in a roadway as taught by Eigenmann. One would have been motivated to do so because Eigenmann teaches that the process is advantageous over using paint to form designs in pavement and are more durable under severe road conditions (col. 1, lines 14-23).

Eigenmann teaches aligning patterns in a non-overlapping relation and where the markings are partially surrounded by another one of the markings (Fig. 4) as required by **claim 14**.

Stonwell et al. teaches patterns that are formed to represent paving stones, cobblestones and bricks (col. 3, lines 1—7 and Fig. 2) which would simulate grout lines and a protective coating is applied and aligned to the edges of the lines as required by **claims 16 and 17**.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stonwell et al. in view of Corbin Jr et al. and Pacey as applied to claim 1 and in further view of 3M Application of Stamark Pre-Cut symbols and legends.

The teachings of Stonwell et al. in view of Corbin Jr et al. and Pacey as applied to claim 1 are as stated above. These references are silent as to applying sheets in an overlapping relation as required by **claim 15**.

3M teaches markings that are applied to roadways such as a railroad crossing (X) symbol which comprises laying out the first diagonal line on the pavement then the overlapping the other diagonal line over the first sheet (Page 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stonwell et al. in view of Corbin Jr et al. and Pacey with the marking of 3M when required to form a certain design which resembles that of a railroad crossing because 3M discloses an optimal way of forming the desired design.

6. Claims 20, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin Jr et al. (US 4854771) and Stonwell et al. (US 5215402).

Corbin Jr. et al. teaches a method of installing a pre-formed pavement marking material on a asphalt surface where the asphalt is softened by means of a portable infrared heater to a temperature sufficient so the pre-formed marking material may be pressed into the asphalt (abstract, col. 2, lines 33-37) and placing the marking material onto the heated pavement (heating in situ), and pressing the marking material using a

roller (col. 2, lines 56-66). Corbin Jr. et al teaches that the pre-formed marking material has a first and second surface where the second surface is not in contact with the substrate because it states that the marking material is pressed into the asphalt after being applied which means the second surface is not in contact with the substrate prior to pressing. Corbin Jr. et al. further teaches that the pre-formed thermoplastic marking materials are superior to painted marking material because they have a longer service life (col. 1, lines 47-49).

Corbin Jr. et al. is silent as to imprinting the sheet by placing a template on the second surface of the sheet; compressing the template to form an impression in the sheet and substrate then removing the template from the second surface as required by **claim 20**.

Stonwell et al. discloses a process for imprinting a pattern in an asphalt surface where a grid-like template is compressed into an asphalt surface. The template is removed and the asphalt is allowed to harden, then a thin coating of colored concrete can be added to the surface of the patterned asphalt to enhance the brick and mortar effect (abstract). Stonwell et al. teaches that the template is compatible with hot asphalt surfaces unlike other conventional tools used to form patterns in hot asphalt.

It would have been obvious to one having ordinary skill in the art to modify the process of Corbin Jr. et al. to include the imprinting process of Stonwell et al. One would have been motivated to do so because both are directed towards processes involving decorating asphalt surfaces and Stonwell et al. further teaches an operable template that can be used with hot asphalt.

Stonwell et al. teaches it is known in the art to apply a release agent to the pattern former in order to prevent it from adhering to the concrete/ asphalt surface (col. 1, lines 50-53) as required by **claim 23**. Corbin Jr. et al. teaches that the sheet is formed from a thermoplastic material and has a thickness of about 25-125 mil (col.1, lines 7-15) as required by **claims 24 and 26-27**. The substrate is an asphalt surface as required by **claim 25**.

7. Claims 28-30 and 36-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corbin Jr. et al. in view of Stonwell et al. as applied to claim 20 above and further in view of Wiley (5653552).

The teachings of Corbin Jr. et al. and Stonwell as applied to claim 20 are as stated above. However, these references are silent as to using a heating apparatus that is mounted for periodic movement across the sheet to gradually increase the temperature as required by **claim 28**.

Wiley teaches a process for heating by moving a heater over a surface in a successive forward and backward direction (abstract) which allows for the asphalt to be heated uniformly and efficiently with minimal or no overheating (col. 6, lines 15-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process of Stowell et al. in view of Corbin Jr. et al. to include gradually heating of the substrate. One would have been motivated to do so because both discloses processes for heating pavement in order to apply a marking

material and Wiley teaches that heating gradually provides uniform heating in an efficient manner while minimizing or eliminating burning or smoking (Wiley et al. col. 5, lines 40-44).

The sheet is heated to a temperature of 150-300°F as stated by Corbin Jr. et al. (col. 2, lines 56-57) as required by **claim 29**. Wiley et al. teaches gradually heating the sheet to a temperature of 100-190°C (220-374°F) (col. 8, lines 29-34) as required by **claim 30**.

Corbin Jr. et al. in combination with Stonwell et al. and Wiley teaches coating a substrate by forming a first pattern in a asphalt substrate; placing a pre-formed thermally settable thermoplastic sheet on the substrate and heating in situ to a temperature to sufficiently adhere the sheet to the substrate in the first pattern where the sheet as a first and second surface (Corbin Jr. et al.) and the heating step is conducted so that there is a gradual increase in temperature. The heating apparatus is mounted on a vehicle, which includes a frame that can periodically pass over the sheet (Wiley col. 7, lines 49-62).

Response to Arguments

9. Applicant's arguments filed 12/24/2007 have been fully considered but they are not persuasive. The applicant argues the motivation in combining the Stowell et al. reference with the Corbin Jr. reference. The applicant states that the Stowell et al. reference is directed to forming an imprint followed by coloring to achieve a brick etc. effect whereas the Corbin Jr. reference is directed to marking materials having noticeable white or yellow colors, and these "pavement marking colors are selected for

their obvious and conspicuous nature and generally are not suitable for simulating cobblestone or brick or mortar" (see page 9 of Arguments). However, the Examiner would like to note that the Stowell et al. reference states that the process taught can be used instead of previous methods taught which would overcome the prior art disadvantages associated with patterning freshly rolled asphalt such as adherence between the pattern and the asphalt. The process of Stowell et al. could be adapted to fit any type of process of applying any decor or marking to asphalt surface. The marking of Corbin Jr. can be applied to impressions and in the process of marking asphalt with roadway marking, one would adapt the process of Stowell et al. Therefore there is motivation in decorating a roadway with a marking to combine the references in order to ensure that the marking material was correctly placed and sufficiently added to the pavement with an extended life.

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CACHET I. SELLMAN whose telephone number is (571)272-0691. The examiner can normally be reached on Monday through Friday, 7:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cachet I Sellman
Examiner
Art Unit 1792

/C. I. S./
Examiner, Art Unit 1792

/William Phillip Fletcher III/
for Timothy H. Meeks, SPE of Art Unit 1792/1700